

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPELLANT:

Yoram Nelken

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System and Method for Automatic Task Prioritization

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George B. Davis

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Dated: Mard 25, 2004

Βv

Charles B. Katz

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Sir:

BRIEF ON APPEAL

REAL PARTY IN INTEREST

The real party in interest is iPhrase Technologies, Inc. of Cambridge, Massachusetts, who is the assignee in full of the present application.

RELATED APPEALS AND INTERFERENCES

The appellant is not aware of any appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal. 330.00 OP

However, the appellant would like to bring to the Board's attention that it has received a Notification Under §1.607(d) of an Attempt to Provoke an Interference, dated June 24, 2003, in connection with U.S. Patent No. 6,408,277, of which the present application is a continuation. Because the appellant does not presently know the basis of the requested interference, as well as whether an interference will be declared, it cannot determine with any certainty how the interference will relate to the Board's decision in the present appeal.

STATUS OF CLAIMS

Claims 1-48, 51-59, 63, 64, 66 and 67 are pending and form the basis of the appeal. No additional claims are pending. Claims 49, 50, 60-62 and 65 have been cancelled.

STATUS OF AMENDMENTS

An after-final amendment was filed by the appellant on October 23, 2003. Pursuant to the Advisory Action dated February 11, 2004, it is the appellant's understanding that the amendment was entered upon filing of this appeal.

SUMMARY OF INVENTION

The automatic task prioritization system and method of the invention may be more easily understood with reference to Figures 1 and 2 of the Application. A contact center 112 serves as a central point for receiving text-based communications over one or more communication channels, such as an e-mail channel 132. Some of the communications received by the contact center 112 may take the form of tasks, which require further action to be taken by an agent drawn from an agent pool 116. The contact center 112 passes communications that embody tasks to an operations center 114. The operations center 114 includes functional components, described in greater detail below, that analyze incoming communications and rank them according to priority such that the agents can identify those communications having greater and lesser degrees of urgency and respond accordingly.

A description of the various functional components of the operations center 114 according to one embodiment of the invention may be found in the application at page 7, line 21 to page 9, line 18. The operations center 114 includes a decision engine 212, which derives and assigns a priority code to each incoming communication by identifying concepts

contained within the communication, which may be achieved, for example, by utilizing a natural language processor as described at page 10, lines 7-8. The operation further includes a task queue 210, which stores incoming communications in order of assigned priority code, so that the communications in the task queue 210 are sequenced in order of decreasing priority, i.e., from items having the highest assigned priority to items having the lowest assigned priority.

The task queue 210 is made available to agents 140-144 of the agent pool 116 through an agent interface 216. Agents 140-144 are guided in their selection of a task to be performed from the task queue 210 by the ordering of the tasks within the queue. However, the agents 140-144 may exercise independent judgment in selecting tasks from the task queue 210 such that a task assigned a relatively lower priority code may be selected for action before a task assigned a relatively higher priority code (and thus appearing higher in the task queue than the selected task). As described at page 11, line 14 to page 12, line 15 of the application, the decision engine 212 preferably includes an adaptive priority module 314 (depicted in Fig. 3), which receives feedback representative of the order in which the agents selected tasks from the task queue 210. This feedback is utilized to update stored priority data, which in turn improves the accuracy of the decision engine in assigning priority codes.

ISSUES

Issue 1- Whether claims 1-48, 51-59, 63, 64, 66 and 67 are anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 4,658,370 to Erman et al?

Issue 2- Whether claims 1-48, 51-59, 63, 64, 66 and 67 are anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 5,687,384 to *Nagase?*

Issue 3- Whether claims 1-48, 51-59, 63, 64, 66 and 67 are anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 6,442,542 to *Ramani et al?*

GROUPING OF CLAIMS

Claims 1-34, 51-56, 63 and 64 (the "First Claim Group") are submitted to be separately patentable from claims 35-48, 57-59, 66 and 67 (the "Second Claim Group"), and the appellant therefore contends that the claims of the First Claim Group do not stand or fall together with the claims of the Second Claim Group. The basis for separate patentability is

the presence of the "contact center" limitation in the claims of the First Claim Group. As is discussed below, the contact center limitation is absent from all of the prior art references on which the Examiner relied in asserting his rejections, and the presence of the contact center limitation in the claims of the First Claim Group is one of the key arguments in favor of patentability.

ARGUMENTS

Issue 1- Whether claims 1-48, 51-59, 63, 64, 66 and 67 are anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 4,658,370 to *Erman et al?*

In the Office Actions dated March 13, 2003 and August 25, 2003, the Examiner rejected claims 1-49 and 51-67 under 35 U.S.C. §102(b) as being anticipated by *Erman et al.* The appellant requests reversal of these rejections for the reasons set forth below.

Claim 1 of the present application recites, inter alia, "a contact center configured to receive said communications." In the aforementioned Office Actions, the Examiner cited Figures 1 and 2 and the abstract of *Erman et al.* as teaching the contact center limitation. In fact, the cited portions of *Erman et al.* disclose only a general purpose computer which executes instructions of a knowledge tool. In response to the appellant's earlier-advanced argument that Erman does not teach a contact center, the Examiner stated that "contact center is [a] broad term which include[s] a computer," drawing an apparent equivalence between the claimed contact center limitation and the general purpose computer of *Erman et al.*

The appellant submits that the Examiner has failed to accord the claimed "contact center" term its ordinary and accustomed meaning. It is a well-settled rule that claims are normally construed as they would be by those of ordinary skill in the art. See, e.g., Fromson v. Advance Offset Plate, Inc., 219 U.S.P.Q. 1137, 1142 (Fed. Cir. 1983); Johnson Worldwide Assocs., Inc. v. Zebco Corp., 50 U.S.P.Q.2d 1607, 1610-11 (Fed. Cir. 1999); CCS Fitness Inc. v. Brunswick Corp., 62 U.S.P.Q.2d 1658, 1662 (Fed. Cir. 2001). The claim term "contact center" has an established meaning in the customer-interaction software art (to which the present application pertains) that is different from, and considerably narrower than, the meaning adopted by the Examiner. More specifically, the term "contact center" has an ordinary and accustomed meaning in the customer-interaction software art of a central point

or node in an enterprise from which contacts with multiple internal and/or external parties (such as customers) are managed. In support of this claim interpretation, the appellant submitted with Amendment and Response B (filed October 25, 2003) copies of three documents, consisting of an entry in an online dictionary for customer relationship management (CRM) professionals, and excerpts from white papers published by parties engaged in CRM-related activities, which set forth definitions of "contact center" that are substantially identical or closely similar to the definition offered above by the appellant. These documents are attached as Exhibits A, B and C. We note that the Examiner has failed to produce any evidentiary or other support for his position that the term "contact center" should be accorded a different meaning.

Erman et al. does not disclose a "contact center", as this term is properly construed. Rather, Erman et al. merely teaches a general purpose computer that executes a computer program containing a number of modules or subroutines. Col. 6, lines 52-56 of Erman et al. Erman et al. fails to teach or suggest that its general purpose computer acts as a central point in an enterprise from which contacts are managed, or that its computer is configured with suitable software and/or hardware to perform this function. Further, one of ordinary skill in the art would not be motivated to modify Erman et al. 's general purpose computer to act as a contact center, since the problem addressed by Erman et al. (construction and interpretation of a knowledge base) does not involve contact management tasks. Because Erman et al. fails to disclose or suggest a contact center, claim 1 is not anticipated thereby, and the §102 rejection based on Erman et al. should be reversed.

Claim 1 further recites "at least one queue configured to store said prioritized communications." The appellant respectfully submits that *Erman et al.* fails to teach or suggest this limitation. As is described in the present specification and known in the software arts, a queue is a multi-element structure wherein the elements (here, communications) are stored in order of precedence (here denoted by an assigned priority code) such that elements having higher precedence are removed from the queue for processing before elements having a relatively lower precedence. The portions of *Erman et al.* cited by the Examiner for this teaching (Abstract and Figures 1 and 2) do not disclose, either expressly or implicitly, a multi-element structure of this description. Since the queue element is absent from *Erman et al.*, the §102 rejection is improper and should be reversed.

Claims 2-17 and 51-53, which depend directly or indirectly from claim 1 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Erman et al.* for at least the reasons advanced above in connection with claim 1.

Independent claim 18 recites elements substantially similar to those discussed above in connection with claim 1. More specifically, claim 18 recites "a contact center configured to receive said tasks" and "at least one queue configured to store said tasks in order of priority code." *Erman et al.* does not disclose either a contact center or a queue, as these terms are properly construed. Therefore, the rejection of claim 18 as being anticipated by *Erman et al.* is improper and should be reversed.

Claims 19-34 and 54-56, which depend directly or indirectly from claim 18 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Erman et al.* for at least the reasons advanced above in connection with claim 18.

Independent claim 35 is directed to a method for automatically prioritizing communications, including a step of "storing said prioritized communications in at least one queue according to priority code." As noted above, *Erman et al.* does not disclose (either in the cited portions or elsewhere) a queue element and a step of storing communications in the queue in accordance with their assigned priority code. Furthermore, there would be no motivation to adapt the knowledge engineering tool of *Erman et al.* to include such a step, since the problem solved by *Erman et al.* (generation of a knowledge base) is distinct and different from the problem solved by the invention of the present Application (prioritization of received communications or tasks). Because *Erman et al.* does not teach or suggest the claimed step of storing prioritized communications in a queue according to priority code, claim 35 is submitted to be patentable over *Erman et al.*

Claims 36-48 and 57-59, which depend directly or indirectly from claim 35 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Erman et al.* for at least the reasons advanced above in connection with claim 35.

Independent claims 63 and 64 recite elements substantially similar to those discussed above in connection with claim 1. More specifically, both claims recite "a contact center configured to receive items" and "at least one queue configured to store the items in order of

priority code." *Erman et al.* does not disclose either a contact center or a queue, as these terms are properly construed. Therefore, the rejections of claims 63 and 64 as being anticipated by *Erman et al.* are improper and should be reversed.

Finally, independent claims 66 and 67 recite elements substantially similar to those discussed above in connection with claim 35. Namely, both claims recite a step of "storing the items prioritized in at least one queue according to the priority code." *Erman et al.* does not disclose a queue element and a step of storing items in the queue in accordance with their assigned priority code, and there would be no motivation to adapt the knowledge engineering tool of *Erman et al.* to include such a step. Because *Erman et al.* does not teach or suggest the claimed step of storing prioritized items in a queue according to priority code, claims 66 and 67 are submitted to be patentable over *Erman et al.*

Issue 2- Whether claims 1-48, 51-59, 63, 64, 66 and 67 are anticipated under 35 U.S.C. §102(b) by U.S. Patent No. 5,687,384 to *Nagase*?

In the Office Actions dated March 13, 2003 and August 25, 2003, the Examiner rejected claims 1-49 and 51-67 under 35 U.S.C. §102(b) as being anticipated by *Nagase*. The appellant requests reversal of these rejections for reasons analogous to those discussed above in connection with the rejections based on *Erman et al.* More specifically, each of the pending claims recites one or both of the following claim elements: (i) a contact center configured to receive communications, tasks, or items, and (ii) a queue element or step of storing prioritized communications, tasks or items in a queue. Neither of these elements is disclosed by *Nagase*.

Claim 1 of the present Application recites "a contact center configured to receive said communications." As discussed above, the claim term "contact center" has an ordinary and accustomed meaning in the customer-interaction software art of a central point or node in an enterprise from which contacts are managed. Nagase does not disclose a "contact center," as this term is properly construed. Instead, Nagase teaches a parsing system that includes an input unit that "designates and inputs sentences or phrases which are the subject of analysis" (col. 5, lines 53-54). The disclosure of Nagase does not include any additional description of the structure or functionality of the input unit, and specifically fails to teach or suggest that

its input unit acts as a central point in an enterprise from which contacts are managed. Since *Nagase* fails to disclose a contact center, claim 1 is not anticipated thereby, and the §102 rejection based on *Nagase* should be reversed.

Claim 1 further recites "at least one queue configured to store said prioritized communications." The appellant respectfully submits that *Nagase* fails to teach or suggest this limitation. As discussed above, a queue is a multi-element structure wherein the elements (in the present Application, communications) are stored in order of precedence (denoted by an assigned priority code) such that elements having higher precedence are removed from the queue for processing before elements having a relatively lower precedence. The portions of *Nagase* cited by the Examiner for this teaching (Abstract and Figures 1-3) do not disclose, either expressly or implicitly, a multi-element structure of this description. Since the queue element is absent from *Nagase*, the §102 rejection is improper and should be reversed.

Claims 2-17 and 51-53, which depend directly or indirectly from claim 1 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Nagase* for at least the reasons advanced above in connection with claim 1.

Independent claim 18 recites elements substantially similar to those discussed above in connection with claim 1. More specifically, claim 18 recites "a contact center configured to receive said tasks" and "at least one queue configured to store said tasks in order of priority code." *Nagase* does not disclose either a contact center or a queue, as these terms are properly construed. Therefore, the rejection of claim 18 as being anticipated by *Nagase* is improper and should be reversed.

Claims 19-34 and 54-56, which depend directly or indirectly from claim 18 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Nagase* for at least the reasons advanced above in connection with claim 18.

Independent claim 35 is directed to a method for automatically prioritizing communications, including a step of "storing said prioritized communications in at least one queue according to priority code." As noted above, *Nagase* does not disclose (either in the cited portions or elsewhere) a queue element and a step of storing communications in the queue in accordance with their assigned priority code. Furthermore, there would be no motivation to adapt the parsing system of *Nagase* to include such a step, since the problem

solved by *Nagase* (parsing an input sentence to generate syntactic category information and syntactic, semantic, and control attributes) is distinct from the problem solved by the invention of the present Application (prioritization of received communications or tasks). Because *Nagase* does not teach or suggest the claimed step of storing prioritized communications in a queue according to priority code, claim 35 is submitted to be patentable over *Nagase*.

Claims 36-48 and 57-59, which depend directly or indirectly from claim 35 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Nagase* for at least the reasons advanced above in connection with claim 35.

Independent claims 63 and 64 recite elements substantially similar to those discussed above in connection with claim 1. More specifically, both claims recite "a contact center configured to receive items" and "at least one queue configured to store the items in order of priority code." *Nagase* does not disclose either a contact center or a queue, as these terms are properly construed. Therefore, the rejections of claims 63 and 64 as being anticipated by *Nagase* are improper and should be reversed.

Finally, independent claims 66 and 67 recite elements substantially similar to those discussed above in connection with claim 35. Namely, both claims recite a step of "storing the items prioritized in at least one queue according to the priority code." *Nagase* does not disclose a queue element and a step of storing items in the queue in accordance with their assigned priority code, and there would be no motivation to adapt the parsing system of *Nagase* to include such a step. Because *Nagase* does not teach or suggest the claimed step of storing prioritized items in a queue according to priority code, claims 66 and 67 are submitted to be patentable over *Nagase*.

Issue 3- Whether claims 1-48, 51-59, 63, 64, 66 and 67 are anticipated under 35 U.S.C. §102(e) by U.S. Patent No. 6,442,542 to *Ramani et al?*

In the Office Actions dated March 13, 2003 and August 25, 2003, the Examiner rejected claims 1-49 and 51-67 under 35 U.S.C. §102(e) as being anticipated by *Ramani et al.*, citing the Abstract and Figures 1-3 of *Ramani et al.* for the teachings of all of the claim elements. The appellant respectfully traverses these rejections for reasons analogous to those

discussed above in connection with the rejections based on *Erman et al.* and *Nagase*. More specifically, each of the pending claims recites one or both of the following claim elements: (i) a contact center configured to receive communications, tasks, or items, and (ii) a queue element or step of storing prioritized communications, tasks or items in a queue. Neither of these elements is disclosed by *Ramani et al.*

Claim 1 of the present Application recites "a contact center configured to receive a communications." As discussed above, the claim term "contact center" has an ordinary and accustomed meaning in the customer-interaction software art of a central point or node in an enterprise from which contacts from multiple internal and/or external parties are managed. Ramani et al. does not disclose a "contact center", as this term is properly construed. Instead, Ramani et al. teaches a diagnostic system configured to identify faults in the operation of a machine (such as a piece of medical equipment) by analyzing data files produced by the machine. The disclosure of Ramani et al. does not include any structure or functionality that could be construed as teaching a central contact point from which contacts with multiple parties are managed. Since Ramani et al. fails to disclose a contact center, claim 1 is not anticipated thereby, and the §102 rejection based on Ramani et al. should be reversed.

Claim 1 further recites "at least one queue configured to store said prioritized communications." The appellant respectfully submits that *Ramani et al.* fails to teach or suggest this limitation. As discussed above, a queue is a multi-element structure wherein the elements are stored in order of precedence such that elements having higher precedence are removed from the queue for processing before elements having a relatively lower precedence. The portions of *Ramani et al.* cited by the Examiner for this teaching (Abstract and Figures 1-3) do not disclose, either expressly or implicitly, a multi-element structure of this description. Since the queue element is absent from *Ramani et al.*, the §102 rejection is improper and should be reversed.

Claims 2-17 and 51-53, which depend directly or indirectly from claim 1 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Ramani et al.* for at least the reasons advanced above in connection with claim 1.

Independent claim 18 recites elements substantially similar to those discussed above in connection with claim 1. More specifically, claim 18 recites "a contact center configured

to receive said tasks" and "at least one queue configured to store said tasks in order of priority code." *Ramani et al.* does not disclose either a contact center or a queue, as these terms are properly construed. Therefore, the rejection of claim 18 as being anticipated by *Ramani et al.* is improper and should be reversed.

Claims 19-34 and 54-56, which depend directly or indirectly from claim 18 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Ramani et al.* for at least the reasons advanced above in connection with claim 18.

Independent claim 35 is directed to a method for automatically prioritizing communications, including a step of "storing said prioritized communications in at least one queue according to priority code." As noted above, *Ramani et al.* does not disclose (either in the cited portions or elsewhere) a queue element and a step of storing communications in the queue in accordance with their assigned priority code. Furthermore, there would be no motivation to adapt the parsing system of *Ramani et al.* to include such a step, since the problem solved by *Ramani et al.* (identifying faults in machine operation by analysis of data files) is distinct from the problem solved by the invention of the present Application (prioritization of received communications or tasks). Because *Ramani et al.* does not teach or suggest the claimed step of storing prioritized communications in a queue according to priority code, claim 35 is submitted to be patentable over *Ramani et al.*

Claims 36-48 and 57-59, which depend directly or indirectly from claim 35 and inherit all of the limitations thereof and of any intervening claims, are submitted to be patentable over *Ramani et al.* for at least the reasons advanced above in connection with claim 35.

Independent claims 63 and 64 recite elements substantially similar to those discussed above in connection with claim 1. More specifically, both claims recite "a contact center configured to receive items" and "at least one queue configured to store the items in order of priority code." *Ramani et al.* does not disclose either a contact center or a queue, as these terms are properly construed. Therefore, the rejections of claims 63 and 64 as being anticipated by *Ramani et al.* are improper and should be reversed.

Finally, independent claims 66 and 67 recite elements substantially similar to those discussed above in connection with claim 35. Namely, both claims recite a step of "storing the items prioritized

in at least one queue according to the priority code." Ramani et al. does not disclose a queue element and a step of storing items in the queue in accordance with their assigned priority code, and there would be no motivation to adapt the fault identification system of Ramani et al. to include such a step. Because Ramani et al. does not teach or suggest the claimed step of storing prioritized items in a queue according to priority code, claims 66 and 67 are submitted to be patentable over Ramani et al.

CONCLUSION

For at least the reasons advanced above, the appellant contends that each of the rejections of the pending claims should be reversed, and the Application should be passed to issue.

Respectfully Submitted,

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Date: March 25, 2004

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APPENDIX

- A system for automatically prioritizing communications, comprising:

 a contact center configured to receive said communications;
 a decision engine configured to determine a priority code for each of said received communications; and
 at least one queue configured to store said prioritized communications in order of priority code.
- 2. The system of claim 1, wherein said decision engine includes a parser configured to analyze content of said received communications.
- 3. The system of claim 1, wherein said communications include text communications and said decision engine includes a parser configured to parse text of said text communications.
- 4. The system of claim 3, wherein said text communications contain natural language that is parsed by said parser.
- 5. The system of claim 2, wherein said parser identifies concepts of said received communications.
- 6. The system of claim 5, wherein said parser identifies relationships between said concepts.
- 7. The system of claim 5, wherein said decision engine compares said concepts with priority criteria to determine said priority codes.
- 8. The system of claim 2, wherein said parser analyzes said received communications by identifying keywords in said received communications.
- 9. The system of claim 1, wherein said communications are received by said contact center via a text-based communication channel.

- 10. The system of claim 1, wherein said communications are voice communications and said decision engine includes a parser configured to analyze content of said voice communications.
- 11. The system of claim 1, wherein an agent having a judgment of priority selects prioritized communications from said queue according to said judgment of priority.
- 12. The system of claim 11, further comprising a monitoring module configured to monitor communications selected by said agent and to provide said selected communications and priority codes of said selected communications as feedback to said decision engine.
- 13. The system of claim 12, wherein said decision engine utilizes said feedback to adjust priority criteria used to determine priority of said received communications.
- 14. The system of claim 1, wherein said decision engine includes a parser configured to parse said received communications and a priority module configured to receive parsed communications from said parser and determine said priority code for each of said parsed communications.
- 15. The system of claim 14, wherein said priority module is a learning system and receives feedback from a monitoring module that monitors communications selected from said queue by at least one agent.
- 16. The system of claim 14, wherein said priority module is a rule-based system that determines said priority code according to a set of predetermined rules.
- 17. The system of claim 1, wherein said priority code is determined in accordance with priority guidelines established by a user of said system.
- 18. A system for automatically prioritizing tasks, comprising:
 a contact center configured to receive said tasks;
 a decision engine configured to determine a priority code for each of said tasks; and

at least one queue configured to store said tasks in order of priority code.

- 19. The system of claim 18, wherein said decision engine includes a parser configured to analyze content of said tasks.
- 20. The system of claim 18, wherein said decision engine includes a parser configured to parse text of said tasks.
- 21. The system of claim 20, wherein said tasks contain natural language that is parsed by said parser.
- 22. The system of claim 19, wherein said parser identifies concepts of said tasks.
- 23. The system of claim 22, wherein said parser identifies relationships between said concepts.
- 24. The system of claim 22, wherein said decision engine compares said concepts with priority criteria to determine said priority codes.
- 25. The system of claim 19, wherein said parser analyzes said tasks by identifying keywords in said tasks.
- 26. The system of claim 18, wherein said tasks are received by said contact center via a text-based communication channel.
- 27. The system of claim 18, wherein said tasks are voice tasks and said decision engine includes a parser configured to analyze content of said voice tasks.
- 28. The system of claim 18, wherein an agent having a judgment of priority selects tasks from said queue according to said judgment of priority.

- 29. The system of claim 28, further comprising a monitoring module configured to monitor tasks selected by said agent and to provide said selected tasks and priority codes of said selected tasks as feedback to said decision engine.
- 30. The system of claim 29, wherein said decision engine utilizes said feedback to adjust priority criteria used to determine priority of said tasks.
- 31. The system of claim 18, wherein said decision engine includes a parser configured to parse said tasks and a priority module configured to receive parsed tasks from said parser and determine said priority code for each of said tasks.
- 32. The system of claim 31, wherein said priority module is a learning system and receives feedback from a monitoring module that monitors tasks selected from said queue by at least one agent.
- 33. The system of claim 31, wherein said priority module is a rule-based system that determines said priority code according to a set of predetermined rules.
- 34. The system of claim 18, wherein said priority code is determined in accordance with priority guidelines established by a user of said system.
- 35. A method for automatically prioritizing communications, comprising: receiving said communications; determining a priority code for each of said received communications; and storing said prioritized communications in at least one queue according to priority code.
- 36. The method of claim 35, wherein the step of determining a priority code includes analyzing content of said received communications.
- 37. The method of claim 35, wherein the step of determining a priority code includes parsing text of said received communications.

- 38. The method of claim 37, wherein said text of said received communications contains natural language.
- 39. The method of claim 36, wherein analyzing content of said communications includes identifying concepts of said received communications.
- 40. The method of claim 39, wherein the step of determining said priority code includes comparing said concepts with priority criteria.
- 41. The method of claim 36, wherein analyzing said received communications includes identifying keywords.
- 42. The method of claim 35, wherein said communications are received via a text-based communication channel.
- 43. The method of claim 35, wherein said communications include voice communications and the step of determining a priority code includes analyzing content of said voice communications.
- 44. The method of claim 35, wherein an agent having a judgment of priority selects communications from said queue according to said judgment of priority.
- 45. The method of claim 44, further comprising the step of monitoring communications selected by said agent and utilizing said selected communications and priority codes of said selected communications as feedback.
- 46. The method of claim 45, wherein utilizing said selected communications and said priority codes includes adjusting priority criteria used to determine priorities of said communications.

- 47. The method of claim 43, further comprising the step of converting said voice communications into text communications prior to determining said priority code.
- 48. The method of claim 43, wherein analyzing content of said voice communications includes identifying emotional content.
- 51. The system of claim 1 wherein the decision engine is capable of learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communications.
- 52. The system of claim 1 wherein the priority codes are determined according to rules for prioritizing communications.
- 53. The system of claim 1 wherein the priority codes are assigned to communications without an assigned priority.
- 54. The system of claim 18 wherein the decision engine is capable of learning new priority criteria based on a relative importance of tasks learned from an order in which an agent selected tasks.
- 55. The system of claim 18 wherein the priority codes are determined according to rules for prioritizing tasks.
- 56. The system of claim 18 wherein the priority codes are assigned to tasks without an assigned priority.
- 57. The method of claim 35 further comprising learning new priority criteria based on a relative importance of communications learned from an order in which an agent selected communication.

- 58. The method of claim 35 wherein the determining is performed using rules for prioritizing communications.
- 59. The method of claim 35 wherein the priority codes are assigned to communications without an assigned priority.

63. A system comprising:

a contact center configured to receive items, which are communications or tasks; a decision engine that

determines a priority code for each of the items received according to rules for prioritizing the items,

is capable of determining the priority code for items without an assigned priority, and

is capable of learning new rules for prioritizing items based on positive and negative feedback related to a relative importance of items based on an order in which an agent selected the items; and

at least one queue configured to store the items in order of the priority code.

64. A system comprising:

a contact center configured to receive items, which are communications or tasks; a decision engine that

determines a priority code for each of the items received according to rules for prioritizing the items,

is capable of determining the priority code for items without an assigned priority, and

is capable of learning new rules for prioritizing items based on a relative importance of items learned from an order in which an agent selected the items, and

includes

a parser and is configured to analyze text, voice, natural language content, emotional content, identify keywords, identify concepts, and

determine relationships between the concepts of the items received; and

at least one queue configured to store the items in order of the priority code.

66. A method comprising:

receiving items, which are communications or tasks that do not have a previously assigned priority;

automatically learning a new priority rule based on an order in which an agent selected the items;

automatically determining priority codes for the items using the new priority rule; and storing the items prioritized in at least one queue according to the priority code.

67. A method comprising:

receiving items, which are communications or tasks that do not have a previously assigned priority;

automatically learning a new priority rule based on an order in which an agent selected the items;

automatically determining priority codes for the items using the new priority rule; parsing the items including

analyzing text contents of items containing text of the items,
analyzing voice contents of items having voice contents of the items,
analyzing natural language contents of items containing natural language of
the items,

analyzing emotional contents of items having emotional content of the items, identifying keywords of items containing words of the items, identifying concepts of items of the item that contain concepts, and determining relationships between the concepts of items having relationships between the concepts of the items; and

storing the items prioritized in at least one queue according to the priority code.

EXHIBIT A

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A contact center (also referred to as a customer interaction center or e-contact center) is a central point in an enterprise from which all customer contacts are managed. The contact center typically includes one or more online call centers but may include other types of customer contact as well, including e-mail newsletters, postal mail catalogs. Web site inquiries and chats, and the collection of information from customers during in-store purchasing. A contact center is generally part of an enterprise's overall customer relationship management (CRM).

A contact center would typically be provided with special software that would allow contact information to be routed to appropriate people, contacts to be tracked, and data to be gathered. A contact center is considered to be an important element in multichannel marketing.

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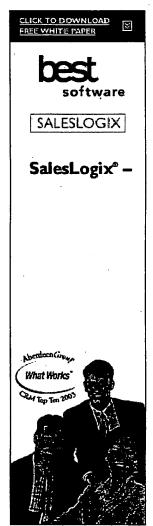
- >> At SearchCRM.com, Bryant Downey differentiates a contact center from a call center.
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The Evolution of the Call Center to 'Customer Contact Center'

White Paper

February 2001

Version 1.0

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Henry M. James, Executive Director

1.1 WHAT IS A CUSTOMER CONTACT CENTER?

As call centers evolve, the call center industry continues to search for a new label that captures the essence of the call center of the 21st century. The driving forces in the evolution of the call center are customer satisfaction and loyalty, in addition to technology. It is fitting that the centers have become known across the industry as customer care or customer contact centers while individual customer contact centers are each defined by their ability to receive and distribute multimedia "contacts" and provide the customer communications flexibility as depicted in Figure 1.

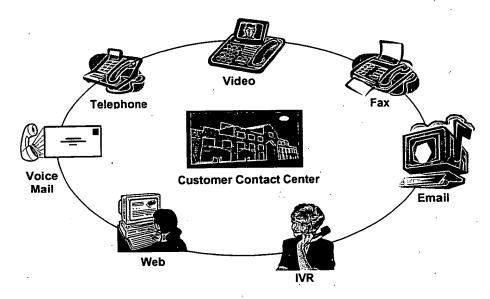


Figure 1. Customer Contact Center

Customer Contact Centers, as they have evolved from telephone call centers, are given the following definition:

"Customer Contact Centers are...a unified Call Center system that can track customer needs no matter which mode they use to contact the organization: telephone, face-to-face, web self-service, e-mail, chat, voicemail, interactive voice response (IVR), video or fax, with the goal of providing consistent service across all touchpoints. "

¹ Costello, D., January 2000, "Death of the Call Center", Sales & Marketing Automation, pp. 31-38.

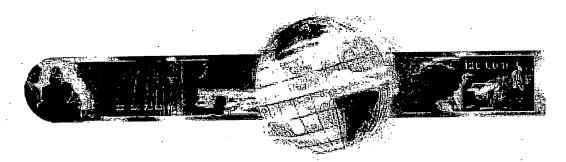
EXHIBIT B

1.2 EVOLUTION OF CALL CENTERS TO CUSTOMER CONTACT CENTERS

It is arguable to say that call centers have been in existence ever since businesses and companies placed telephones on employee's desks. The formal "Call Center" label did not come into use until 1980, however, customers or clients still had the option to call a company with a question or concern, and speak to a company representative. With the only real existing call center related technology at that time being the phone, the company representative would then either answer the question, or ask for the caller's name and phone number to call them back. In order to provide the customer with information, the company employee had to manually research the issue by the time-intensive process of searching through paper records and files to find answers to questions.

In the 1960's and 1970's, the advent of computers allowed organizations to begin providing improved service to customers over the phone. Using computer technology, employees now had the means to obtain information more readily about products or services while speaking with a customer over the phone. This helped eliminate the need for employees to complete a manual search for information, and place a call back to the customer. Call centers were beginning to use switching equipment on the premises, however Private Branch Exchanges (PBX's) were still extremely limited in their ability to handle multiple calls and call switching. The PBX basically provided a one-to-one relationship between the inbound call from the customer and the employee.

The introduction of the Personal Computer (PC) in the 1980's meant telephone functionality could become increasingly computer controlled as depicted in Figure 2. Computer performance and capability evolved, which made it possible for the switches to handle large volumes of calls and to be able to route those calls to the next available agent. With advanced public digital telephone infrastructures and the ability of the first line agent to take orders, check inventories, etc., organizations were able to provide a total service for its customers via the telephone. This ability for providing total service via one telephone call has had a profound impact on the way business is conducted around the world.



Transforming Your Call Center into a Contact Center: Where Are You? Trends & Recommendations

An IDC Executive Brief (#33)

Adapted from: Worldwide CRM Applications Market Forecast and Analysis Summary, 2001–2005, IDC #24790, June 2001

The corporate call center is changing as new forms of communication are giving corporations new burdens — and new opportunities. Customers can now contact enterprises in many different ways — via a Web site, email, text chat, voice over IP (VOIP), and, of course, through the phone. Not only must corporations enable these many different types of interactions, they must serve the customer the same way, no matter what means they use for contact. Companies need to remember email conversations when they have a customer on the phone, and vice versa.

This level of customer service demands that the call center evolve to become something more — a contact center. A contact center is a centralized point for providing customer service for all types of customer interaction. One of the keys to successfully implementing a contact center is to provide agents with integrated access to all forms of customer contact. Once a company has made this step, it will gain several advantages. These advantages include greater operational efficiencies, better customer service and retention, and the ability to wean itself off of an over reliance on email as a means of communicating with customers.

